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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 09/881,001 | 06/15/2001 | Per-Anders Kristian Lof | 203198US-8CIP | 7375 |
| 22850 7590 02/28/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | EXAMINER NGUYEN, TAN D | |
| | | | ART UNIT 3629 | PAPER NUMBER |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | NOTIFICATION DATE | DELIVERY MODE | |
| 3 MONTHS | | 02/28/2007 | ELECTRONIC | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

09/881,001

Applicant(s)

LOF ET AL.

Examiner

Tan Dean D. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-16, 18-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Amendment filed 11/24/06 has been entered. Claims 1-16, 18-30 are pending. Claims 1-14 have been withdrawn. Claims 15-16, 18-30 are active and are rejected as followed. Claim 17 is canceled.

I. *Claim Rejections - 35 USC § 112*

1. Claims 15-16, 17-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 15, line 8, the phrase "variable about of electric power" is vague and indefinite.

II. *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 15-16 are rejected under 35 U.S.C. 103(a) as obvious over PEREZ in view of Applicant Admitted Prior Art (AAPA) or vice versa.**

As of 11/24/06, independent method claim 15 is as followed:

Claim 15 (Currently Amended): A method for coordinating power output from a renewable power production facility with another power production facility so as to implement a virtual energy storage mechanism for the renewable power production facility, comprising steps of:

(a) producing and applying to transmission lines a predetermined amount of electric power collectively provided by the renewable power production facility and from said other another power production facility, said renewable power production facility applying a variable about of electric power, and said another power production facility applying a controllable amount of electric power;

(b) determining that an the variable amount of power produced by the renewable power production facility deviates from a threshold by a predetermined quantity;

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(c) informing said another power production facility of said predetermined quantity;

(d) adjusting a power output of said other another power production facility by said pre-determined quantity; and

(e) keeping an account balance in a memory of an amount of energy to be later produced by the another power production facility on behalf of the renewable power production facility.

Note that for convenience, letters (a)-(e) are inserted before each step.

Similarly, **PEREZ** discloses a method for coordinating power output between several power generators/producers wherein one of the power generator/producer is a renewable power {col. 1, lines 38-40 "*use of photovoltaic systems*" or "PV systems", col. 3, lines 14-15 "*renewable resources, such as wind power generation*"}, comprising the steps of:

(a) producing and applying to transmission lines a predetermined amount of electric power collectively provided by the renewable power production facility and from said other another power production facility, said renewable power production facility applying a variable amount of electric power, and said another power production facility applying a controllable amount of electric power {see Fig. 1, col. 6, lines 1-10};

(b) determining an amount of power produced by (1) renewable power producer that deviates (deviation) from a pre-determined threshold (value, target, or suggested);

(c.) informing said (2) other power producer of the deviation amount;

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(d) adjusting the power output of (2) other power producer for an amount that corresponds to the deviation amount of step (c.).

See col. 1, lines 51-56, col. 2, lines 25-60. Figs. 2-3. Note that PEREZ discloses that the variable load is powered by the power grid and the PV supply with a load adjustment threshold and controlling the load within a predefined range. Note that on col. 3, lines 10-15, PEREZ indicates that the renewable resources are non-controllable so that that controllable resources are other power resources from the power grid. As for the term "power production facility", this reads over "power producer system" or "power supply or generation" or "power plant" {see col. 3}. Also, the selection of any predetermined quantity or amount which depends on desired condition would have been obvious to a skilled artisan in view of the teachings of "pre-defined range" above. Therefore, it would have obvious to adjust the power deviation amount from the renewable resources with the other power from the power grid as taught by PEREZ above. PEREZ fairly teaches the claimed invention except for (e).

In a similar method for coordinating power output from a renewable power production facility with another power production facility so as to implement a virtual energy storage mechanism for the renewable power production facility, AAPA fairly teaches step (e) for the purpose of fulfilling the power exchange contract and balance obligation agreement settlement as shown on pages 6-9, Figs. 2-3, especially Fig. 3. It would have been obvious to modify the teachings of PEREZ by carrying out step (e) as taught by AAPA for the purpose of fulfilling the power exchange contract and balance obligation agreement settlement as shown on pages 6-9, and Figs. 2-3 of AAPA.

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Alternatively, the teaching of AAPA, as shown on pages 6-9 and Figs. 2-3, fairly teaches steps (a) and (e) but fails to explicitly shows steps (b)-(d). The teachings of PEREZ with respect to steps (b)-(d) is cited above. It would have been obvious to modify the teachings of AAPA by carrying out steps (b)-(d) as taught by PEREZ to adjust the controllable amount of electric power based on the changing of the variable amount of electric power as taught by PEREZ.

As for dep. claim 16 (part of 15 above), which deals with the type of renewable power, i.e. wind turbine, this is non-essential to the scope of the scope of the invention and is also taught in col. 2, lines 14-15.

5. Dependent claim 18 (part of 15 above) are rejected under 35 U.S.C. 103(a) as being unpatentable over PEREZ /AAPA or vice versa as applied to claims 15-16 above, and further in view of EDELMAN et al (US Patent 6,281,601).

As for dep. claim 18 (part of 15 above), which basically deals with mechanism for storing the excess/unused energy and monitoring or keeping an account of the storage amount, these are fairly taught in EDELMAN et al on Fig. 2, element (50) "ENERGY STORAGE (POWER SOURCE)" with bi-directional power controller (40) with various energy components which can be used to supply, store and/or use power in an efficient energy management manner {see col. 3, lines 40-55}. It would have been obvious to modify the teachings of PEREZ / AAPA to include power controller and energy storage mechanism as taught by EDELMAN et al for efficient energy management manner.

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6. Dependent claims 19-27 (part of 15 above) are rejected under 35

U.S.C. 103(a) as being unpatentable over PEREZ /AAPA or vice versa as applied to claims 15-16 above, and further in view of TAKRITI (US Patent 6,021,402).

As for dep. claims 19-27 (part of 15 above), which basically deal with cost optimization of renewable power sources, i.e. offering a sale when market price is favorable, these are fairly taught in TAKRITI col. 4-7 which basically deal with a method for optimization cost for managing generating units of an electrical utility which handles multiple fuels (energy resources), fuel constraints, varying fuel prices, power trading, and load uncertainty, for the goal of meeting the electric demand of customers at a minimal cost while making the maximum profit possible from power trading {see col. 4, line 58 to col. 5, line 10. It would have been obvious to modify the teachings of PEREZ/AAPA to include cost optimization of renewable power source (type of fuel) by the optimization teachings of TAKRITI for the purpose/goal of meeting the electric demand of customers at a minimal cost while making the maximum profit possible from power trading as taught by TAKRITI above.

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7. **Dependent claims 28-30 (part of 15 above) are rejected under 35 U.S.C. 103(a) as being unpatentable over PEREZ /AAPA as applied to claims 15-16 above, and further in view of PITCHFORD et al (US Patent 6,327,541).**

As for dep. claims 19-27 (part of 15 above), which basically deal with the steps for implement the last step of (d) adjusting step by electronic and non-electronic communications, these are fairly taught in PITCHFORD et al Figs. 1A, elements 20, 22, 24, 28, Fig. 2B, col. 1, line 10, to col. 2, line 33 for the 4 benefits as cited on col. 2, lines 26-34. It would have been obvious to modify the teachings of PEREZ / AAPA to include electronic and non-electronic communications for implementing step (d) as taught by PITCHFORD et al for at least 1 of the 4 benefits cited in col. 2, lines 25-34, or col. 1, lines 27-32, 55-60.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

9. Applicant's arguments with respect to claims 15-30 have been considered but are moot in view of the new ground(s) of rejection which are due to applicant's amendment.

No claims are allowed.

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10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct@uspto.gov>. Should you have any questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

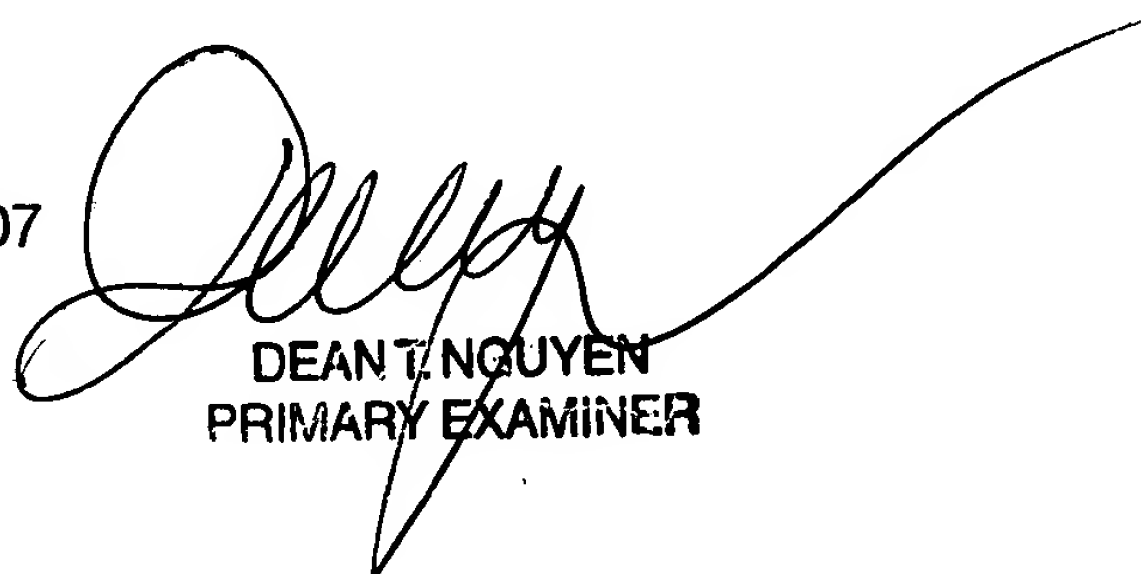
In receiving an Office Action, it becomes apparent that certain documents are missing, e. g. copies of references, Forms PTO 1449, PTO-892, etc., requests for copies should be directed to Tech Center 3600 Customer Service at (571) 272-3600, or e-mail CustomerService3600@uspto.gov.

Any inquiry concerning the merits of the examination of the application should be directed to Dean Tan Nguyen at telephone number (571) 272-6806. My work schedule is normally Monday through Friday from 6:30 am - 4:00 pm. I am scheduled to be off every other Friday.

Should I be unavailable during my normal working hours, my supervisor John Weiss can be reached at (571) 272-6812.

The main FAX phone numbers for formal communications concerning this application are (571) 273-8300. My personal Fax is (571) 273-6806. Informal communications may be made, following a telephone call to the examiner, by an informal FAX number to be given.

dtn
February 19, 2007



DEAN T. NGUYEN
PRIMARY EXAMINER